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## SERVICE INCOME AND PROPERTY INCOME.

By SCOTT NEARING, *Wharton School, University of Pennsylvania.*SERVICE *vs.* PROPERTY OWNERSHIP.

Heretofore, political economy has been content to discuss income under the heading of rent, interest, profits, and wages. The situation in the United States cannot be analyzed as it was by the English economists, since there is no American landlord class, and therefore no capitalist class distinct from the landlord class. Agricultural land, for the most part, is owned by individual farmers, or by persons of moderate means. The natural resources and the industries of the country are owned and capitalized through the corporate system of business organization. In England there is still a landlord who owns the coal lands, and a capitalist who develops them; in the United States, the natural resources are, for the most part, owned and developed by the same industrial group.

A classification loses virility whenever it becomes a mere abstraction. That classification only possesses real vitality which has some specific bearing on the conditions that it aims to describe. An appeal to the present income facts in the United States will alone provide a classification of income which will be really applicable to the conditions now prevailing.

Theories aside, an appeal to the world of affairs shows that the current industrial facts in the United States make the logical income distinction one between that income which is the product of effort, and that income which is the product of property ownership. The individual whose effort creates values for which society pays, receives service income. The individual who secures a return because of his property ownership receives a property income.

The importance of the contrast between service and property income is represented not by the fact that it will separate the working class from the leisure class, but that it will lay the basis for the elimination of exploitation, on the one hand,

and of economic parasitism, on the other hand. Economic salvation does not lie through class conflict, but through distinctions which will pay the worker the full value of his work, and drive the idler out of society.

#### THE BASIC INCOME QUESTION.

The basic income question is one, not of theory, but of fact. Marginal acres, marginal dollars of capital, and marginal laborers may be figments of the economic imagination, or they may be symbols of a real economic distinction. In the city of Omaha or of Portland, in the factories of Brockton, in the sweatshops of Pittsburgh and New York, in the mines of West Virginia and Colorado, the marginal man is missing. In his place there appear great industrial enterprises which are engaged in the production of economic goods of a certain value. For these goods, or these values, the forces of the community contend. In that production and in that contention lies the real problem of distribution.

The matter may be made still more concrete. An industry—steel-making, for example—takes raw materials, and by the process of manufacture adds to them value equivalent to one hundred dollars. What part of that hundred dollars goes in wages and salaries to the workers in the industry? What part of it goes in interest and dividends to the owners of the stocks and bonds? The former receive service income; the latter, property income. What proportion of the values goes in either direction?

The income question, thus boldly stated, cannot be answered with absolute accuracy. Up to the present time, most industries have failed to issue public reports which permit of a full income analysis. In the very near future public bodies, such as the Interstate Commerce Commission, the public utilities and railroad commissions, and other similarly organized tribunals, will secure and compile this information. For the time being, almost the only authentic facts are those which have been collected and presented by the Interstate Commerce Commission, and by a few of the State public utilities commissions.

The compilation of income facts is a stupendous task, far beyond the energies of any one individual. The task will never be successfully completed until the government takes it in hand. Meanwhile, an individual, using the facts available, may point to the sharp distinction existing between income from services and income from property.

Many enthusiasts have hoped that when the facts were compiled there would appear some off-hand answer regarding the proportion of industrial income which was paid for services, and the proportion that was paid for property ownership. "Half and half," cries the agitator. "Sixty per cent. for wages, and 40 per cent. for dividends," vociferates his more conservative confre. The most cursory study of the available facts reveals the groundlessness of this hope, and the fallacious nature of such assertions. When all of the income facts are analyzed, classified, and compiled, some government expert will be able to announce that of the total values created in the manufacturing industries, a given percentage goes for services, and another given percentage for property ownership. At the present time, however, the knowledge is but fragmentary. The proportions vary from industry to industry, and from establishment to establishment. Even at the present time, however, for a given group of establishments, and for certain industries, facts are available which show accurately what amount of the values produced in that segment of the industrial process goes for services, and what amount goes for property ownership. A long step toward an authentication of this general position is taken by Dr. Streightoff. Although he makes his statement incidentally, placing it in a footnote, he finds that reliable information is obtainable from official sources showing the apportionment of service and of property income in several large industries. Dr. Streightoff's note is as follows:

"Dr. Spahr, in his 'Essay on the Present Distribution of Wealth in the United States' (pp. 88-92, 120), has concluded that in Basel, France, Saxony, the United Kingdom, and the United States, 40 per cent. of the national incomes goes to capital, and 60 per cent. to labor. Recent available figures for eight large American industries, employing over

three million laborers, give to capital a return in dividends and interest of \$1,276,419,050, and to labor in salaries and wages of \$2,031,402,210, a total income of \$3,307,821,260, of which the share of labor is 61 per cent., and that of capital 39 per cent. That these figures are typical of the whole field of American industry is questionable."\*

TABLE I.  
RETURNS OF CAPITAL AND LABOR IN EIGHT INDUSTRIES.

Industries.	Year.	Outstanding Capital Stock and Bonds.	Interest and Dividends.	Wages and Salaries.	Number of Employees.
Telegraphs.....	1902	\$162,946,252	\$8,206,975	\$15,030,673	27,627
Telephones.....	1907	1,072,805,93	36,049,779	68,270,127	144,169
Express companies.....	1910	105,523,300	33,564,411	39,491,032	79,284
Central electric light and power stations.....	1907	1,341,995,182	46,142,902	31,935,309	42,066
Street and electric railways.....	1907	3,774,772,096	125,954,062	150,991,099	221,429
Incorporated mines and quarries.....	1902	3,217,719,458	86,020,837	354,079,476	528,720
185 Industrial combinations.....	1900	3,093,095,868	135,126,612	227,861,188	424,686
Steam railways.....	1910	18,417,132,238	805,353,472	1,143,725,306	1,699,420
Totals .....		\$31,185,990,660	\$1,276,419,050	\$2,031,402,210	3,167,401

An examination of Streightoff's table shows several noteworthy facts. In the first place, all of the data relate to the decade 1900 to 1910. In the second place, six of the eight groups of industries are ordinarily described as "public utilities." In the third place, the ratio between property income (interest and dividends) and service income (wages and salaries) is far from being a constant factor. For the eight groups of industries the ratio between property income and service income is four to six. Electric light and power stations give an opposite ratio of nine to six, while the industrial combinations report a ratio of one to four. The really interesting thing about the table is the fact that in 1912 an investigator was able to find eight groups of industries having a combined capitalization of thirty billions of dollars, all of which reported property income as distinct from service income.

The reason for the clarity of these reports as regards the distinction between property and service income lies ready

\* "The Distribution of Incomes in the United States," F. H. Streightoff, New York, Columbia University Press, 1912, pp. 44, 45.

at hand. The public, in recent years, has showed a keen interest in property income. The predatory activities of certain corporations, together with the commonly accepted opinion that certain great businesses had "struck it rich," led to the appointment of commissions and other inquisitorial bodies, who were charged with this, among other duties, to find out how much these great enterprisers were making. The result of this public demand may be viewed in any library where State and Federal reports are on view.

Many accounts are so kept at the present time, either because business reasons demand it, or because government officials insist upon it, that the amounts paid for property and for service income may be readily ascertained. Such accounts must provide the basis for a study of the present-day income facts. The present study\* purports to carry forward, if only for a few steps, the lines of income investigation which have been started by Hobson, Cannan, Spahr, Streightoff, and the other economists who are interested in income facts.

#### THE ANSWER FOR TRANSPORTATION AGENCIES.

Among all of the highly organized businesses, none are more highly organized than the transportation agencies, particularly the railroads. The pioneer work in railroading once completed, railroad managers were enabled to turn their attention to the problems of organization and administration. The result of their activities is a marvelously wrought business system which has been investigated, rounded out, and standardized by public authorities. For no group of industries is the information regarding property and service income so complete as it is for the railroads.

The problem may be stated in these general terms. A hundred dollars of value is created by an industry. Of this hundred dollars, how many dollars go in the form of service

\*Throughout this study, the figures used are for 1909, 1910, and 1911, years which were arbitrarily necessitated by the availability of the figures. The census returns of the Thirteenth Census are for 1909. Most of the railroad and public utilities commissions are at least two years behind the calendar in the issue of reports. If the various groups of figures were to be at all comparable, they should be selected with some reference to the census year. Furthermore, the years 1910 and 1911 seemed fairly representative of normal business conditions. All of these reasons led to the use of data for 1910 and 1911 whenever it was available. In a few special cases 1912 data were used. These cases are, however, exceptional.

income, and how many dollars go in the form of property income? The answer will obviously vary with the character of the industry, so that an answer for railroads is not in any sense an answer for other industries. Neither will an answer for an entire industry hold good for individual railroads. The amount of income paid, particularly in the form of property income, must vary with the success of each separate business, and with the local conditions surrounding its operations.

The reader will remember that the railroad is a business involving a particularly heavy original outlay. The roadbed, terminals, rolling stock, the rights of way, and other initial charges on railroad construction are immense. Once made, these capital investments are unusually permanent. The process of making, however, involves a very heavy outlay. In 1911, railroad operations brought the railroads of the United States a revenue of \$2,789,761,669. From other sources, such as rent credits, income received on the stocks, and bonds of companies under their control, and similar miscellaneous sources, the income was \$77,815,345.\* The total income of the railroads from all sources therefore was a little more than two and three quarters billions of dollars. During the same year, the total amount paid in wages and salaries was \$1,208,466,470,† while the entire amount paid in the form of interest was \$406,609,204, and the amount of dividends was \$291,497,164, making the total of \$698,106,368 paid out in the form of income for railroad property holdings.‡

Thus of the entire receipts for all of the railroads in the United States in 1911, three sevenths were paid in wages and salaries, and one fourth in interest and dividends. The approximate ratio between the amount of service income and the amount of property income on the railroads of the United States was therefore 12 to 7.

There is, of course, considerable variation from one part of the country to another, and from one class of railroads to another, in the ratio between service income and property income. The Interstate Commerce Commission has divided

\* Statistics of the Railways in the United States, Interstate Commerce Commission, Washington, Government Printing Office, 1913, p. 53.

† *Ibid.*, p. 29.

‡ *Ibid.*, p. 53.

the country into three Districts,—the Eastern district, comprising “that portion of the United States bounded on the west by the northern and the western shore of Lake Michigan to Chicago, thence by a line to Peoria, thence to East St. Louis, thence down the Mississippi River to the mouth of the Ohio River, and on the south by the Ohio River from its mouth to Parkersburg, W. Va., thence by a line to the southwestern corner of Maryland, thence by the Potomac River to its mouth. The Southern District comprises that portion of the United States bounded on the north by the Eastern District, and on the west by the Mississippi River. The remainder of the United States, exclusive of Alaska and of island possessions, is included in the Western District.”\*

A similar division is made of the railroads into three classes based upon their financial importance. Class I includes those roads with gross operating revenues of \$1,000,000 or more. Class II includes those roads which have gross operating revenues of \$100,000, but of less than \$1,000,000. Class III includes those roads which have revenues of under \$100,000. An analysis of the returns from the United States by class and by districts shows that while the ratio between operating rail revenue and total compensation is comparatively stationary, at about 7 to 3, the ratio between the operating rail revenues and the total amount paid in interest and dividends varies considerably. On the larger roads (Class I) one fifth of the operating rail revenues is paid out in the form of interest and dividends in the East and in the South, while more than a quarter is so used in the West. The total of Class I roads shows a ratio between operating rail revenue and total interest and dividends of 4 to 1. On the Class II and Class III roads the ratio is slightly more than 5 to 1.

A brief summary of these facts compiled from the reports of the Commission gives an excellent idea of the general ratio on which the railroads disposed of \$2,750,000,000 of gross earnings which they received in 1911.

\* *Supra*, pp. 9, 10.

TABLE II.

OPERATING RAIL REVENUES, TOTAL COMPENSATION, AND TOTAL INTEREST AND DIVIDENDS, BY CLASSES AND DISTRICTS, FOR THE RAILROADS OF THE UNITED STATES. 1911.\*

Classes and Districts.		Operating Rail Revenue.	Total Compensation.	Interest and Dividends.
Class I Roads	East.....	\$1,180,093,370	\$543,860,234	\$233,945,112
	South.....	405,419,448	166,891,480	79,552,808
	West.....	1,107,005,585	457,104,180	312,426,020
	Total.....	\$2,692,518,403	\$1,167,855,894	\$625,923,940
Class II Roads	East.....	\$28,219,316	\$12,358,326	\$6,056,328
	South.....	11,588,011	4,223,821	2,639,861
	West.....	40,408,098	16,678,382	9,087,590
	Total.....	\$80,215,425	\$33,260,529	\$17,783,779
Class III Roads.....	East.....	\$4,158,947	\$1,883,018	\$835,461
	South.....	4,298,413	1,741,002	957,581
	West.....	8,570,481	3,726,027	1,983,436
	Total.....	\$17,027,841	\$7,350,047	\$3,776,478
All Operating Roads.....	East.....	\$1,212,471,633	\$558,101,577	\$240,836,911
	South.....	421,305,872	172,856,304	84,040,350
	West.....	1,155,984,164	477,508,589	160,917,046
	Total.....	\$2,789,761,669	\$1,208,466,470	\$648,374,227

\* *Supra*, p. 54, 55.

An analysis of the above table shows the Class II and Class III roads to be negligible factors. Together they report less than 5 per cent. of the total gross earnings. Interest must therefore center in the Class I roads, which are the important roads of the country. On these important roads, for each \$100 paid in compensation, \$54 is paid as interest and dividends. The ratio of service to property income is therefore, roughly, 7 to 4.

These facts derived from a general survey of the aggregate figures for the large roads of the United States may be checked and supplemented from various other sources. In addition to the reports published by the Interstate Commerce Commission, there are a number of states which publish reports on the railroads operating within the state boundaries, and upon certain railroads whose lines enter the state. An analysis of these figures throws additional light on the division of railroad revenue, by giving returns for individual states and individual roads.

The Public Service Commission for the First District of New York\* reports for the steam railroads operating under its jurisdiction a total compensation of \$559,544, and a total payment in interest and dividends of \$209,792. The ratio of service income to property income is therefore approximately 5 to 2. These railroads are obviously of minor importance.

Two of the state railroad commissions publish returns for several of the larger railroad systems. The following table contains figures for a number of systems, compiled from the reports of the Minnesota and Iowa Commissions:†

TABLE III.

OPERATING REVENUES, TOTAL COMPENSATION, AND TOTAL INTEREST AND DIVIDENDS FOR CERTAIN RAILROAD SYSTEMS, 1911 AND 1912. (a)

Railroads.	Operating Revenues.	Total Yearly Compensation.	Total Interest and Dividends.	Ratio between Service and Property Income.
Chicago, Burlington and Quincy . . . . .	\$86,723,000	\$35,208,000	\$19,562,000	2-1
Chicago and Northwestern . . . . .	73,699,000	33,088,000	19,227,000	11-6
Rock Island . . . . .	61,871,000	26,982,000	16,755,000	3-2
Great Northern . . . . .	66,161,000	22,517,000	27,296,000	3-4
Northern Pacific . . . . .	63,424,000	24,198,000	27,020,000	6-7
Iowa Central . . . . .	3,511,537	1,193,832	1,188,885	1-1
Santa Fe . . . . .	89,164,217	34,740,915	28,046,045	5-4

(a) *Supra*, pp. 54, 55.

A glance at the last column of the table in which a rough estimate is made of the ratio of service income to property income will show the variation which always appears when individual establishments are compared. The ratio for all of the roads between gross earnings and compensation is fairly uniform, ranging from 3 to 1 in the case of the Great Northern, and Iowa Central, to  $2\frac{1}{2}$  to 1 in the case of the other roads. The ratio between revenues and the amounts paid in interest and dividends shows no such uniformity. For the Chicago, Burlington, and Quincy the ratio of service income to property income is 2 to 1; for the Northern Pacific it is 6 to 7. Between these two extremes fall the other roads.

\* Annual Report of the Public Service Commission of New York, First District, 1911, Volume II, pp. 19-20.

† Annual Report of the Minnesota Railroad Commission, 1913, Minneapolis, 1913, pp. 200-314. Also the Annual Report of the Board of Railroad Commissioners of Iowa, 1911, Des Moines, 1913, pp. 339-413.

This table shows this very clearly—that while a general statement may be made regarding the relation between operating revenue and compensation for the larger Western railroads, no such statement will hold for the ratio between compensation and amount paid in interest and dividends. The latter figure depends largely upon the prosperity of the individual road. Hence the variation is considerable.

This fact is further emphasized by some additional figures showing the ratio between operating income and total interest and dividends. (In none of these cases were the figures for total compensation available.) The Lake Shore and Michigan Southern reports an operating income of \$48,452,126; dividends of \$9,999,298; and interest of \$6,379,832. This would make the ratio between operating income and property income 3 to 1.\* The New York Central, with operating revenue of \$100,741,601, reports the payment of \$18,868,966 in property income, a ratio of 5 to 1;† the Pennsylvania, with operating revenue of \$157,234,107, reports the payment of \$26,096,471 in property income, a ratio of 6 to 1;‡ and the Delaware, Lackawanna, and Western, with an operating revenue of \$35,947,066, reports the payment of \$6,028,800 in dividends (6 to 1).§

The railroad facts are well authenticated and fairly complete. For all of the leading roads, 44 per cent. of the operating rail revenues is paid for compensation, and 23 per cent. is paid for interest and dividends. The railroads of the United States in 1911 had completed the lines of a well defined picture of income values. Under the then existing arrangements, the owners of railroad property were receiving more than half as much as the people who do the work of the railroads.

The information regarding the other transportation industries is less satisfactory. There were in the United States in 1912, 30,317 telephone systems reporting an annual income of less than \$5,000, with 1,228,935 miles of wire and 1,402,844 telephones.|| The total income of these systems was \$255,-

\* Annual Report of the Michigan Railroad Commission, 1911, Lansing, 1912, pp. 199-208.

† Annual Report of the Public Service Commission of New York, Second District, 1911, Volume III.

‡ *Idem.*

§ *Idem.*

|| Bureau of the Census, Bulletin No. 123, Telephones and Telegraphs, 1912, Washington Government Printing Office, 1914, p. 18.

081,234. Of this total, \$96,040,541 was paid out in the form of salaries and wages, \$20,163,960 in the form of interest, and \$34,120,809 in the form of dividends. The surplus was \$17,205,516.\* In the telephone business the service income is almost twice as great as the property income.

The land telegraph systems of the United States report for 1912† gross receipts of \$52,337,211. Salaries and wages are reported as \$23,797,980, interest as \$1,608,593, and dividends as \$3,139,861. The ratio of service to property income is here about 5 to 1.

The data for express companies collected by the Interstate Commerce Commission show:‡

Operating revenue.....	\$76,198,754
Other income.....	5,633,792
<hr/>	
Total Income.....	\$81,832,546

The total payments for interest were \$950,407; for dividends out of current income, \$5,928,104; out of surplus, \$26,775,727, making a total payment in property income of one third of the total income. The dividend payments out of surplus were swelled by a \$24,000,000 dividend paid by the Wells-Fargo Company. The credit balance carried from income to balance sheet was \$59,215,601.

The Iowa Railroad Commission furnishes two other classes of instances in which both service and property incomes are available. There are terminal railway companies in Iowa which report the payment of \$329,049 in wages and salaries, and \$37,553 in interest and dividends.§ The total operating receipts are comparatively small—slightly more than \$200,000 from rail operations with additions from rents of various kinds. The ratio between service and property income here is very much higher than that in the case of railroad companies. The Iowa report also contains an analysis of accounts of five

\* Bureau of the Census, Bulletin No. 123, Telephones and Telegraphs, 1912, Washington Government Printing Office, 1914, p. 19.

† *Ibid.*, p. 25.

‡ Statistics of Express Companies for 1910, Interstate Commerce Commission, Washington Government Printing Office, 1912, p. 15.

§ Annual Report of the Railroad Commissioners of Iowa, *op. cit.*, pp. 483-498.

bridge companies with a total capital of \$12,625,800.\* The income is derived from rail operations, joint facilities interest, and miscellaneous sources. During 1911, the total compensation paid was \$41,443, the total amount of dividends \$331,464, and the total amount of interest \$87,500. Therefore the ratio of service to property income is 1 to 10. No conclusion can be drawn from these instances. They are inserted here merely because they indicate the extent of the variation which may occur between service and property income.

The transportation business differs from many other businesses. The gross receipts cover the return for service in its various forms, and there is no deduction from them as there is in manufacturing for raw materials. At the same time, the total amount of capital invested per employee is comparatively high, because of the great initial charge involved in railroad construction. Approximately half of the gross receipts of transportation agencies are paid out in the form of service income (wages and salaries). An amount is paid in the form of interest and dividends varying with the industry and the individual establishment.

#### THE ANSWER FOR MUNICIPAL UTILITIES.

Another five years of investigation and of compilation by public utilities commissions will bring together data regarding the income from municipal utilities (street car service, gas, electric light, and water) as complete as that which now exists for the railroads. At the present time, the data are fragmentary in character. The Bureau of the Census has compiled, once in five years, a complete series of reports for the electric railways of the United States, showing the operating earnings, and dividends and interest paid, as well as wages and salaries. For 1907, the last of available data, the total operating earnings of the street and electric railways of the United States were \$418,887,858.† The amount paid for

\* Annual Report of the Railroad Commissioners of Iowa, *op. cit.*, pp. 504-516.

† Street and Electric Railways, 1907, Special Report of the Census, Washington Government Printing Office, 1910, p. 26.

wages and salaries was \$150,991,099, while the total amount of dividends was \$54,485,274, and the total amount of interest was \$71,468,788. From these figures it appears that three eighths of the operating earnings on street and electric railways goes to the payment of service income, and five sixteenths to the payment of property income. The ratio between service income and property income is therefore 6 to 5.

In passing, it may be noted that on the street railway lines the interest charges exceed the dividends—the ratio between the two is 4 to 3. The ratio for all of the railroads of the United States is very similar (\$406,000,000 and \$291,000,000). In both cases the primary capital outlay is heavy.

A few state reports cover the same ground as that included in the Federal report. The Maine Railroad Commission\* reports on the operations of 15 street railways in the state as follows: Total wages and salaries, \$1,116,106; total dividends, \$228,477; interest, taxes, and other charges, \$784,029. Apparently the ratio of service and property income is approximately the same in Maine as for the country at large.

The Public Service Commission of the First District in New York† shows a total compensation of \$28,632,580, and a total payment of interest and dividends of \$12,204,640. Here the ratio of service to property income is 7 to 3. This ratio is considerably lower than that for the country at large.

One Minnesota street railway (the Minneapolis and St. Paul Company) with operating revenues of \$444,504, reports the payment of \$170,733 in total yearly compensation, and of \$58,445 in interest and dividends. The proportion of service to property income is in this instance almost exactly 3 to 1.‡

The Census Bulletin for 1912 dealing with street and electric railways shows a gross income from all sources of \$585,930,517. Payments for wages and salaries equal \$200,890,939; the total interest charges were \$98,025,338, and the total dividend charges were \$51,650,117. The ratio of service to property income was therefore 10 to 7.§

\* Annual Report for 1912, *op. cit.*, pp. 10-32.

† Annual Report for 1911, *op. cit.*, Volume II, pp. 133-326.

‡ Annual Report of the Minnesota Railroad Commission, 1911, *op. cit.*

§ Street and Electric Railways, 1912, Bureau of the Census, Bulletin No. 124, Washington Government Printing Office, 1911, p. 66.

A ratio apparently exists between operating revenues, and service and property income on street railways approximately similar to that for steam railroads. As in the case of railroads, there are variations in the ratio between service and property income from one establishment to another. The property income is relatively higher here, however, and the railroad ratio (12 to 7) is exceeded.

The data for other public utilities are far less satisfactory than those available for street and electric railways. For the First District in New York, the total compensation paid by gas companies was \$8,894,766, while the total payments of interest and dividends was \$10,548,564.\* In the same district the electric companies paid \$6,663,600 in compensation, and \$5,395,654 in interest and dividends. The companies operating both gas and electric franchises in the First District of New York paid a total compensation amounting to \$16,850,676, and a total of interest and dividends of \$19,443,164. These figures obviously do not justify any general conclusion. The situation in smaller cities and towns may differ considerably. In New York, however, it appears that the payments of property income equal, or even exceed, the payments for service income.

Partial reports from a number of individual gas companies show the ratio between gross earnings, and interest and dividends. These gas companies are, for the most part, in small towns. The ratio runs at 3 to 1, 4 to 1, and 5 to 1.

The Wisconsin Railroad Commission reports on the operating revenues and the payments for interest and dividends of certain public utilities in 1911.† For gas utilities the ratio is 4 to 1; for electric utilities it is 4 to 1.

The relation between service income and property income differs little from that in the railroad industry. There are a few instances in which the payments of property income exceed the payments of service income. In general, however, the conclusions which apply to the railroads are equally effective in the case of public utilities.

\* Annual Report of the Public Service Commission, 1911, *op. cit.*, Volume III.

† Annual Report of the Railroad Commission of Wisconsin, 1910-11, Madison, 1912, Volume II, Part IV.

## THE ANSWER FOR MANUFACTURING INDUSTRIES.

The manner in which the values created in manufacturing industries are disposed of is far less clear than it is in the case of transportation and of public utilities. The books are similarly kept; the facts could be made as readily accessible, yet to date, there has been little effort to collect and analyze them.

It is interesting in this connection to bear in mind the relation existing between the values derived from transportation and from manufacturing. The railroads in the United States show for 1911 gross earnings of \$2,750,000,000. During 1909 the "value added by manufacture" to the raw materials which entered into the manufacturing processes is reported by the census as \$8,500,000,000. In other words, the total amount of values created in manufacture is approximately three times as great as the total created in the railroad industry, the figures for railroading being for 1911, and the figures for manufacturing for 1909.

The study of manufacture which was made in connection with the Twelfth Census (1900) contained the most complete statement available of the relation between service and property income in the manufacturing industries. There were 185 industrial combinations covered in the census investigations. The capital invested in these combinations was \$3,093,095,-868, the item for wages and salaries was \$227,861,188, and the item for interest and dividends was \$135,126,612. The ratio of service to property income is in this case 5 to 3.\*

The only accurate up-to-date information on the relation between service and property income is that contained in a few scattered reports on individual industries. These figures are necessarily indicative rather than conclusive.

Three important companies engaged in the manufacture of iron and steel make reports which permit of analysis into service and property income. The Bethlehem Steel Corporation in its report for 1913 † shows the payment of \$4,374,653 in interest and dividends, and \$13,993,417 in wages and salaries. At the same time, \$7,500,000 was set aside for additions to

\* Census of Manufacturers, 1900, Part II, pp. lxxvi-lxxix.

† Ninth Annual Report of the Bethlehem Steel Corporation for year ending December 31, 1913.

property and working capital, and the net earnings were \$8,750,000, of which \$1,528,785 was applied for depreciation, and \$2,214,517 appeared as surplus. The amount paid in service income is three times as great as the amount paid in property income, but the amount of interest and dividends, plus the amount set aside for additions to capital, plus the balance, is almost exactly equal to the amount paid for services.

The earnings of the United States Steel Corporation and of the Republic Iron and Steel Company were analyzed in great detail in the recent Federal Report on the Steel Industry.\* For 1911, the total receipts of the United States Steel Corporation from all sources were \$618,911,430. Of this amount, 23 per cent. was paid out for wages and salaries, 16 per cent. was paid out as interest and dividends, and 5 per cent. was set aside as surplus. The ratio of service to property income is therefore 3 to 2. Unfortunately the interest charge includes depreciation, replacement, and sinking funds. In this connection it is interesting to note that in 1911, while \$161,419,000 was paid in wages and salaries, the undivided surplus of the steel corporation was \$156,275,000, an amount almost equal to the total paid in wages and salaries during that year.†

The Republic Iron and Steel Company for 1911, with total receipts of \$24,680,288, charged 30 per cent. to wages and salaries, 11 per cent. to dividends and interest (including depreciation and interest charges), and had a surplus of 5 per cent. of the total receipts.‡ The ratio of service to property income is here 3 to 1.

The material giving directly the amount paid by manufacturing industries in service and in property income is meager in the extreme. There are, however, two sources from which some information on the subject may be gleaned. On the other hand, the census data on manufacture give for all industries and for specific industries the total value of products and the total payments for wages and salaries. These figures show the relation between gross value, or value added by manufacture, and service income. Several states publish like data.

\* Report on Conditions of Employment in the Iron and Steel Industry, United States Bureau of Labor, 1912, Washington Government Printing Office, 1913.

† Report on Conditions of Employment in the Iron and Steel Industry, *op. cit.*, p. 277.

‡ *Ibid.*, p. 279.

On the other hand, a body of information exists in those corporation reports which gives gross income and total payments for interest and dividends. From these figures total property income may be ascertained. The two sets of figures certainly cannot be compared. Both, however, are suggestive.

The general census tables contain but a partial analysis of the disposition of the values derived from manufacturing. They report the values added by manufacture (the gross value or selling value of the materials minus the cost of the raw material), and the wages and the salaries. It is thus possible to show what part of the values derived from manufacturing was paid out in the form of service income. There is nothing in the census figures for 1910 that gives any clue to property income.

The value of all products produced by manufacturing industries in 1909 was \$20,750,000,000.\* The value added by manufacture was \$8,572,527,000. The total amount charged against "services" (a term under which the census includes all salaries and wages) was \$4,375,000. Thus almost exactly half of the value added by manufacture was paid out in the form of salaries and wages. The reader will remember, by way of comparison, that slightly less than half of the operating rail revenues of railroads was paid out as service income.

The ratio between value added by manufacture and total payment for services is not at all uniform in the different manufacturing industries. Indeed, the variation is many times greater than that shown by the statistics of railroads. While the ratio is 2 to 1, in the manufacturing industries at large, it stands 33 to 1 in the manufacture of distilled liquors, and 20 to 19 in the case of general shop construction by railroad companies. A table of the 35 industries in which the value of the products for 1909 is reported to exceed \$75,000,000, shows that for the most part the relation between the value added by manufacture and the total amount paid for services remains fairly constant, varying between 5 to 2 and 5 to 3. In this entire group of industries there are six instances in which less than two fifths of the value added by manufacture is paid out in the form of service income, and five instances in which more

\* Abstract of the Thirteenth Census of the United States, p. 436.

than three fifths of the value added by manufacture is paid out in the form of service income.

There are a number of state bureaus of labor which publish information regarding the total receipts from manufacturing, the cost of materials and supplies, and the total amount of wages paid. Unfortunately, there are no instances in which the states report the amount of salaries as well as the amount of wages. The information available in the state sources must therefore be regarded as of distinctly inferior value to that in the Federal Census.

The state of Oklahoma furnishes information regarding its manufacturing industries for 1911.\* During that year, the total receipts from the sale of manufactured products were \$81,857,148. The figures in this report show that the cost of materials used in the manufacturing industries of Oklahoma is five eighths of the total value of the products. This proportion is the same as that shown by the United States Census figures. Of the value added by manufacture, 45 per cent. was paid in wages. If salaries had been included in this statement (they usually amount to about 5 per cent. of the value added by manufacture), the ratio of value added by manufacture to service income would be virtually the same as that reported by the United States Census.

New Jersey and Massachusetts publish statistics showing the value added by manufacture and payments in the form of wages. The figures for Massachusetts vary somewhat from those of Oklahoma.† The Massachusetts industries are primarily textile. The wages paid in these textile industries are lower, and a smaller proportion of the value added by manufacture is paid to the wage-earners. An analysis of the figures published by the New Jersey Bureau of Statistics‡ shows a situation which differs very little from that recorded in the United States Census and in the Oklahoma report. On the whole, it may be fairly said that the state reports do not differ in any material way from the figures published by the latest Federal Census.

\* Annual Report of the Department of Labor, Oklahoma, 1911-12, Oklahoma City, pp. 150-153.

† Twenty-fifth Annual Report of the Statistics of Manufacturers, 1910, Bureau of Statistics, Boston, 1912, pp. 2-12.

‡ Bureau of Statistics of New Jersey, 1911, Camden, 1912, pp. 10-26.

A generalization is permissible at this point. It seems to be true that about one half of the value added to the raw materials by the American manufacturing industries is paid out as wages and salaries, while those with a comparatively small capital investment report a far larger proportion. Although the generalization does not hold true for specific industries, it does seem to be borne out by the results obtained by state as well as Federal studies.

The figures showing the relation between gross values or total values created in the manufacturing industries, and the payments for service income, are far less usable from a statistical standpoint than the figures showing value added by manufacture. The immense difference in the net value of raw materials leads to wide differences in the ratio of gross values to service income. The total figures from the census shows that of the gross value created in manufacture, the amount paid in wages and salaries constitutes about one fifth for all industries. This proportion seems to be a representative one.

However desirable it might be to reject these figures for gross values and adhere to the values added by manufacture, the manner in which most industrial accounts are kept do not permit of any such procedure. If service and property incomes in the manufacturing industries are to be compared, attention must center on gross returns, because that is the only figure which appears in corporation accounts. Even that is absent from most accounts, or else a complication of accounting prevents the student from determining the amount of interest or of dividends. There are a number of manufacturing industries, however, for which the manuals publish fairly satisfactory data.

One of the most frequently discussed companies is the Pullman Company. This company, with a capital of \$120,000,000 (no funded debt) reports for 1912-13 total revenues from all sources:—

Sleeping car operations.....	\$40,103,216
Auxiliary operations.....	1,091,875
Manufacturing plant.....	31,320,181
	<hr/>
	\$72,415,272

Net corporate income.....	14,714,704
Dividends, 1912-13.....	9,439,769

Apparently (for the accounts are not entirely clear) the ratio between total revenues and the amount paid in dividends is 8 to 1, while the ratio between total revenue and the amount of net corporate income is 5 to 1. In this connection, it is worth remembering that although the amount paid in dividends by the Pullman Company is only one eighth of the gross revenues, the Pullman Company has increased its capital from \$18,000,000 to \$120,000,000 by declaring stock dividends.\* Nowhere is there adequate statement to show the proportion of gross earnings which the Pullman Company pays in service income.

The ratio between gross earnings, the amount paid in interest and dividend, and the amount set aside as surplus by certain companies which make fairly complete reports, appears in the following table:

TABLE IV.

RATIO OF GROSS INCOME TO PROPERTY INCOME AND TO SURPLUS IN CERTAIN REPRESENTATIVE INDUSTRIES.

Companies.	Year.	Ratio of Gross Income to	
		Interest and Dividends.	Amount set aside as Surplus.
American Locomotive Company	1910-11	20 to 1	25 to 1
American Woolen Company.....	1909	20 to 1	25 to 1
Baldwin Locomotive Works.....	1912	12 to 1	16 to 1
Dupont Manufacturing Company.....	1912	7 to 1	20 to 1
General Baking Company.....	1912	16 to 1	50 to 1
General Electric Company.....	1911	11 to 1	14 to 1
International Paper Company.....	1910-11	16 to 1	30 to 1
National Biscuit Company.....	1910	12 to 1	8 to 1
Pittsburgh Plate Glass Company.....	1911-12	11 to 1	50 to 1

There are a few smaller companies for which the figures are available. These cases, most of them among the successful large manufacturing concerns, illustrate the extent of the

\* The Manual of Statistics, New York Manual of Statistics Company, 1913, p. 735.

variation and the general ratio existing between gross income and property income. Apparently from 5 to 10 per cent. of the gross income of such companies goes for the payment of interest and dividends. It will be remembered that for all manufacturing industries the percentages paid in service income was about 20 per cent.

The student will note with keen disappointment the lack of adequate data on which to base any general statement of the ratio between service and property incomes in the manufacturing industries. That the figures are as readily obtainable for the larger manufacturing industries as they are for the railroads and other public utilities goes without saying. They cannot be worked out and satisfactorily presented until a thorough expert study is undertaken by some official body. Probably real enlightenment in this direction lies in the creation of a commission with powers like those of the Interstate Commerce Commission, to compel the keeping of uniform accounts.

For the time being this much may be said. Half of the total value added to the raw material by the processes of manufacture is paid out in the form of service income. The proportion paid in property income is less, very much less, in fact, although no defensible statement may be made in terms of figures. Of the gross income from manufacturing industries, a fifth is paid out in the form of service income, and a considerably less proportion takes the form of property income.

#### MINING, SMELTING, AND REFINING.

Perhaps the Michigan Copper strike revealed a unique example of the relation between service and property income. At the same time, the strike resulted in the publication of some significant facts regarding the income situation in the copper mining industry, and showed that certain of the properties were yielding immense returns on the capital invested.

The full text of an illuminating report\* throws into the foreground the operations of the Calumet and Hecla Company, and the companies which it controls. The actual cash

\* Michigan Copper District Strike, United States Bureau of Labor, Bulletin 139, Washington Government Printing Office, 1914.

paid into this company seems to have been \$12 per share on 100,000 shares, the par value of which is \$25. The Calumet and Hecla Company reports for 1912 \$4,364,360 paid in the form of interest and dividends, and \$3,193,073 paid in wages. Exactly what percentage of the total compensation this term "wages" includes, the report does not make clear. If the ordinary relation between wages and salaries exists, about 5 per cent.\* should be added to this amount in order that the total amount paid in the form of service income may be ascertained. The amount of interest and dividends is considerably in excess of the total amount paid in wages and salaries.

An examination of appendices 2 and 3 in the same report shows that while the Calumet and Hecla Company is the largest and apparently by far the most successful of the companies reporting, there are other ventures almost equally successful. The ratio of service to property income in the case of the Calumet and Hecla Company is probably unique. At the same time, it is one instance, on a huge scale, of an industry which pays more dollars per year, to the holders of the property than to the people who carry on the work.

The figures showing the relation between service and property incomes in the mining industry are far from satisfactory. The figures published in the Thirteenth Census† show a total value of the production of mines and quarries of \$1,238,410,000. The expenses of operation and development were \$1,042,634,000. This total includes the expenditures for services, supplies, royalites, taxes, contract work, rents of offices, and the like. Apparently all of the costs of the business are included except the payment for interest and the fund for dividends and surplus. Although it would seem that the \$200,000,000 of difference between value of products and expenses of operation represents property income, surplus, depreciation and insurance, such an inference is wholly unsupported, and may be unjustified.

The census does make clear the relation between the value of products and the costs of operation, on the one hand, and

\* Abstract of the Thirteenth Census, Table 110, pp. 514 ff.

† Mines and Quarries, 1909, Bureau of the Census, Washington Government Printing Office, 1913, pp. 334-335.

the payment for services on the other. The total expense for services was \$662,422,000, or about one half of the value added to products and three fifths of the total cost of operation. Among the principal mining industries the proportion of total value of products to service income is about 2 to 1. It is highest in bituminous coal mining (4 to 3), and lowest in the production of petroleum and natural gas (5 to 1). For the most part, the ratio holds fairly constant.

The census report on Mines and Quarries for 1902\* contained an analysis for all incorporated companies showing the total amount paid in wages and salaries, and the total amount paid in interest and dividends. The value of products for 1902 was \$796,826,417; the total of wages and salaries was \$354,079,000 and the total of interest and dividends was \$86,021,000.† The ratio between total value produced and service income was therefore about 2 to 1, and between total value and property income, 9 to 1.

Such fragmentary information in the mining industry as may be gathered from the manual of industrial statistics shows that the variation between total earnings and property income is extreme. Few of the mining companies making reports have funded debts. They are, for the most part, capitalized by the issue of stock, on which the dividends vary widely.

#### SERVICE AND PROPERTY INCOMES.

Any one who sets out to find for service and property income a fixed rate which will hold true among all industries, or that will hold true throughout any one industry, is doomed to bitter disappointment. No such ratio exists, and in the very nature of things, it cannot exist. Variations in the conduct of individual businesses, and in the character of various classes of businesses, necessarily lead to variations in the service—property income ratio.

A fixed formula between service and property income is not in any sense indispensable, however convenient it may be. The important fact lies in the existence of a demonstrable relation between service and property incomes.

\* Special Report of the Census Bureau, Washington Government Printing Office, 1905.

† *Ibid.* pp. 68 and 88.

The business accounts of today give no clue to "rent, interest, wages, and profits." In so far as modern accounting is concerned, the terms as they were used by nineteenth century economists are obsolete. In their place appears a new terminology including such words as "compensation," "dividends," "interest," and "surplus." Compensation is service income; dividends and interest are property income; surplus is undistributed income, or income the distribution of which has not yet been determined. If the economists is to talk in terms that the man on the street can understand, he will have a distinction between service and property income that is clear-cut and logical, on the one hand, and which, on the other hand, is being constantly more definitely formulated and lived up to by the world of affairs.

The data for distinguishing service from property income are as yet incomplete. Yet the logic of the distinction seems no less inevitable than the trend of fact in that direction. As the material aggregates it will become more and more clear that the income issues of the next generation must concern themselves with incomes from services, on the one hand, and incomes from property on the other. The distinction is vital, and it takes added significance with each passing year.